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AMENDMENTS TO THE CLAIMS

Please amend the claims as indicated in the following listing of all claims:

1. (Currently amended) An integrated circuit comprising:
a temperature sensor providing a temperature measurement of the integrated circuit;
a programmable storage location storing a first temperature limit value, the
programmable storage location accessible via an instruction executed by the
integrated circuit; and
compare logic coupled to the temperature sensor and the storage location to provide an
indication of a comparison between the temperature measurement and the first
temperature limit value,
wherein the integrated circuit asserts a first temperature control signal which is supplied
on a first output terminal of the integrated circuit when the temperature
measurement is above the first temperature limit value; and
wherein the instruction is assigned a privilege level sufficient to access the programmable
storage location.

2. (Canceled)

3. (Previously Presented) The integrated circuit as recited in claim 1 wherein the
integrated circuit deasserts the first temperature control signal, which is supplied on the first
output terminal of the integrated circuit, when the temperature measurement indicated by the
temperature sensor falls below a programmable second temperature limit value.

4. (Currently amended) The integrated circuit as recited in claim 1 An integrated circuit
comprising:
a temperature sensor providing a temperature measurement of the integrated circuit;
a programmable storage location storing a first temperature limit value, the
programmable storage location accessible via an instruction executed by the
integrated circuit; and

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compare logic coupled to the temperature sensor and the storage location to provide an indication of a comparison between the temperature measurement and the first temperature limit value,
wherein the integrated circuit asserts a first temperature control signal which is supplied on a first output terminal of the integrated circuit when the temperature measurement is above the first temperature limit value, and
wherein the integrated circuit deasserts the first temperature control signal, which is supplied on the first output terminal of the integrated circuit, in response to access to a control location in the integrated circuit.

5. (Previously Presented) The integrated circuit as recited in claim 1 wherein the integrated circuit deasserts the first temperature control signal, which is supplied on the first output terminal of the integrated circuit, according to a programmable mode of operation that includes at least one of deasserting when the temperature measurement falls below a programmable second temperature limit value and deasserting when a control location in the integrated circuit is accessed.

6. (Previously Presented) The integrated circuit as recited in claim 1 wherein the first temperature limit value is a panic value indicating a temperature limit for safe integrated circuit operation.

7. (Previously Presented) The integrated circuit as recited in claim 1 further comprising an addressable storage location coupled to the temperature sensor, the addressable storage location accessible by an instruction executed by the integrated circuit and supplying an indication of the temperature measurement on the integrated circuit.

8. (Previously Presented) The integrated circuit as recited in claim 1 further comprising: a second output terminal coupled to provide external to the integrated circuit an asserted signal when the temperature measurement indicated by the temperature sensor is above a second temperature limit value.

9. (Original) The integrated circuit as recited in claim 8 further comprising:

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a second storage location supplying the second temperature limit value; and
second compare logic coupled to the second storage location and coupled to receive the
temperature measurement of the integrated circuit, and wherein the second
compare logic generates a second indication of when the temperature
measurement of the integrated circuit is above the second temperature limit value.

10. (Original) The integrated circuit as recited in claim 9 further comprising:
a third storage location supplying a third temperature limit value;
third compare logic coupled to the third storage location and coupled to receive the
temperature measurement, and wherein the compare logic generates a third
indication that the temperature measurement of the integrated circuit is below the
third temperature limit value.

11. (Previously Presented) The integrated circuit as recited in claim 10 wherein the
integrated circuit asserts a first temperature control signal which is supplied on a first output
terminal of the integrated circuit when the temperature measurement indicated by the
temperature sensor is below the third temperature limit value.

12. (Original) The integrated circuit as recited in claim 1 wherein the integrated circuit
is a microprocessor.

13. (Canceled)

14. (Canceled)

15. (Canceled)

16. (Canceled)

17. (Canceled)

18. (Canceled)

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19. (Canceled)

20. (Previously Presented) A method comprising:
measuring a temperature of an integrated circuit with a temperature sensor, the
temperature sensor being a circuit within the integrated circuit;
comparing the measured temperature to a first limit value stored in the integrated circuit;
generating a signal on a first output terminal of the integrated circuit according to the
comparison to control the temperature of the integrated circuit; and
accessing a control location in the integrated circuit to cause the signal to be deasserted.

21. (Canceled)

22. (Canceled)

23. (Previously Presented) A method comprising:
measuring a temperature of an integrated circuit with a temperature sensor, the
temperature sensor being a circuit within the integrated circuit;
comparing the measured temperature to a first limit value stored in the integrated circuit;
and
generating a signal on a first output terminal of the integrated circuit according to the
comparison to control the temperature of the integrated circuit;
comparing the measured temperature to a second limit value stored in the integrated
circuit;
asserting a second signal on a second output terminal of the integrated circuit when the
measured temperature is above the second limit value, thereby indicating that the
temperature has exceeded a safe limit; and
deasserting the second signal by accessing a control location in the integrated circuit.

24 – 25. (Canceled)

26. (Canceled)

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27. (Canceled)

28. (Canceled)

29. (Canceled)

30 – 33. (Canceled)

34. (Canceled)

35. (Canceled)

36. (Canceled)

37. (Canceled)

38. (Canceled)

39. (Canceled)

40. (Currently amended) The integrated circuit of claim 1, An integrated circuit comprising:

a temperature sensor providing a temperature measurement of the integrated circuit;
a programmable storage location storing a first temperature limit value, the
programmable storage location accessible via an instruction executed by the
integrated circuit; and

compare logic coupled to the temperature sensor and the storage location to provide an
indication of a comparison between the temperature measurement and the first
temperature limit value,

wherein the integrated circuit asserts a first temperature control signal which is supplied
on a first output terminal of the integrated circuit when the temperature
measurement is above the first temperature limit value; and

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wherein a BIOS includes the instruction.

41. (Currently amended) The integrated circuit of claim [[39]] 40 further comprising the BIOS executable to set addresses for the compare logic and to map the programmable storage location to an input/output space.

42. (Canceled)